WHAT IS CLAIMED IS:

1. An electroluminescent device comprising a cathode, an anode, and located therebetween a light emitting layer (LEL) containing (1) a host material that comprises a N,N,N',N'-tetra-aromatic benzidine group substituted in at least one position ortho to the biphenyl linkage between the phenyl groups of the benzidine nucleus and (2) a phosphorescent light emitting material, wherein the triplet state energy of the benzidine nucleus is higher than the triplet state energy of the phosphorescent emitting material.

2. The device of claim 1 wherein the light emitted from the light emitting layer has maximum intensity at a wavelength between 600 and 700 nm.

3. The device of claim 1 wherein the light emitted from the light emitting layer has maximum intensity at a wavelength between 500 and 600 nm.

4. The device of claim 1 wherein the light emitted from the light emitting layer has maximum intensity at a wavelength between 400 and 500 nm.

5. The device of claim 1 wherein host material and the phosphorescent emitting material are separate compounds.

6. The device of claim 1 wherein at least one substituent ortho to the benzidine biphenyl linkage exhibits a Sterimol parameter B1 of at least 1.5.

7. The device of claim 1 wherein at least one substituent ortho to the benzidine biphenyl linkage exhibits a Sterimol parameter B1 of at least 2.0.

8. The device of claim 1 wherein the benzidine is substituted in at least two positions ortho to the biphenyl linkage.

9. The device of claim 1 wherein the sum of the Sterimol parameter B1 of the substituents ortho to the biphenyl linkage is at least 3.0.

10. The device of claim 1 wherein the benzidine is substituted in at least three positions ortho to the biphenyl linkage.

11. The device of claim 1 wherein the benzidine is substituted in 4 positions ortho to the biphenyl linkage.

12. The device of claim 1 wherein the tetra-aromatic groups comprise at least one phenyl group.

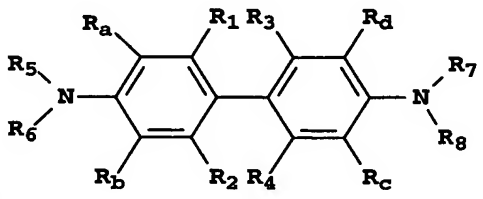
13. The device of claim 1 wherein the tetra-aromatic groups are independently selected phenyl groups.

14. The device of claim 1 wherein the tetra-aromatic groups comprise at least one biphenyl group.

15. The device of claim 1 wherein the at least one ortho substituent is selected so as to provide a triplet twist angle of at least 20°.

16. The device of claim 1 wherein the at least one ortho substituent is selected so as to provide a triplet state twist angle of at least 35°.

17. The device of claim 1 wherein the host material is represented by Formula (1),



(1)

wherein:

R_1, R_2, R_3 and R_4 represent hydrogen or an independently selected substituent, provided that at least one of R_1, R_2, R_3 and R_4 represents a substituent;

R_5, R_6, R_7 and R_8 each represent independently selected aromatic groups, provided that the substituents represented by R_5 and R_6, and R_7 and R_8 do not join to form a ring.

R_a, R_b, R_c and R_d represent hydrogen or an independently selected substituent.

18. The device of claim 17 wherein at least two of R_1, R_2, R_3 and R_4 comprise substituents.

19. The device of claim 17 wherein at least three of R_1, R_2, R_3 and R_4 comprise substituents.

20. The device of claim 17 wherein all four of R_1, R_2, R_3 and R_4 comprise substituents.

21. The device of claim 17 wherein R_1, R_2, R_3 and R_4 are selected so as to provide a triplet state twist angle of at least 20°.

22. The device of claim 17 wherein R_1, R_2, R_3 and R_4 are selected so as to provide a triplet state twist angle of at least 35°.

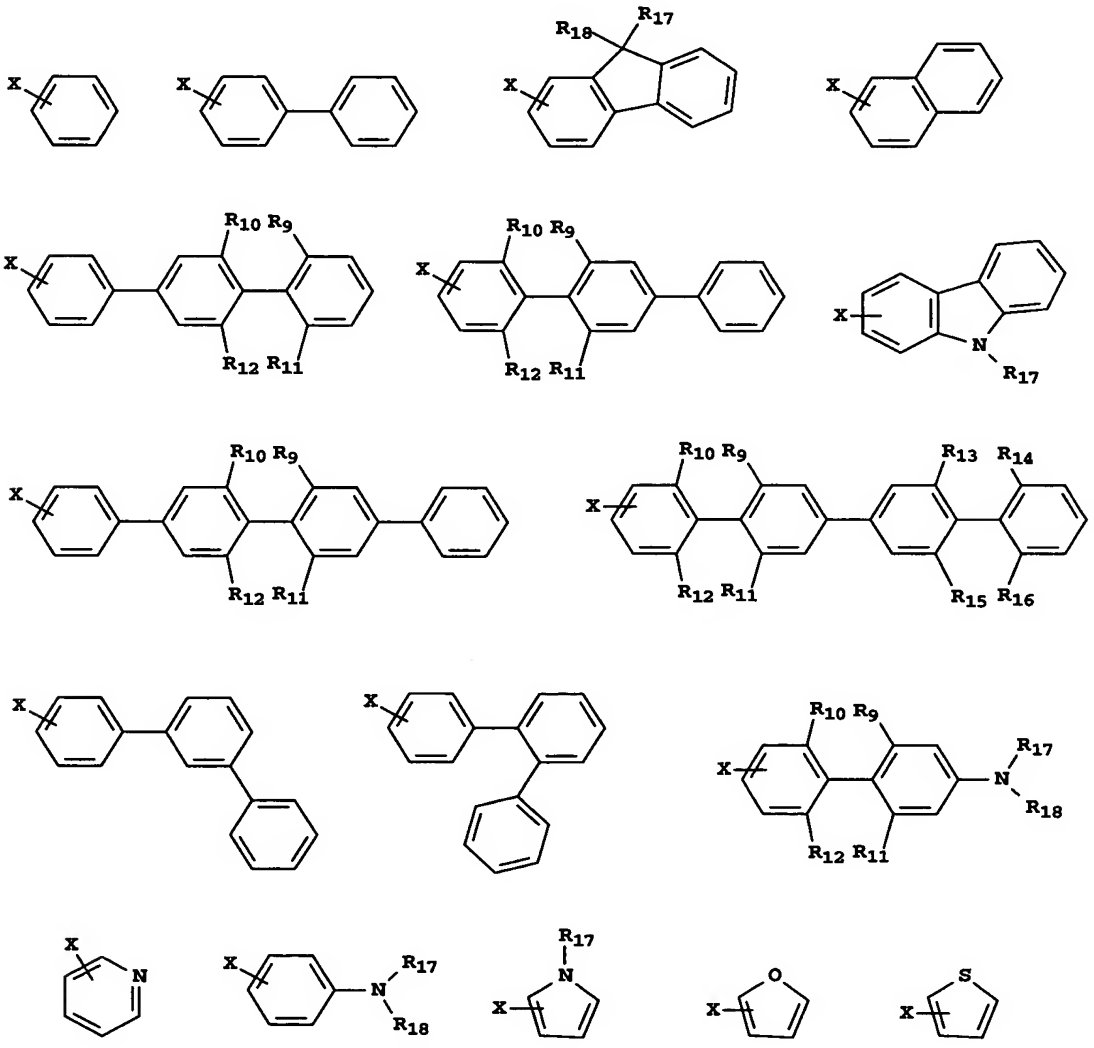
23. The device of claim 17 wherein at least one of R_1, R_2, R_3 and R_4 comprises a fluoro substituent.

24. The device of claim 17 wherein at least two of R_1, R_2, R_3 and R_4 comprise fluoro substituents.

25. The device of claim 17 wherein R_1, R_2, R_3 and R_4 each represent fluoro substituents.

26. The device of claim 17 wherein R_1, R_2, R_3 and R_4 represent fluoro substituents and R_5, R_6, R_7, and R_8 represent *p*-biphenyl groups.

27. The device of claim 17 wherein at least one of R_5, R_6, R_7, and R_8 represent substituents independently selected from the following listed groups;



wherein:

R_9, R_{10}, R_{11}, R_{12}, R_{13}, R_{14}, R_{15}, and R_{16} are hydrogen or an independently selected substituent group, provided that the triplet state twist angle of the adjacent biphenyl linkage is greater than 25°;

R_{17} and R_{18} are independently selected substituent groups; and

X designates the ring that is attached to the nitrogen atom of Formula (1).

28. The device of claim 27 wherein the triplet state twist angle of the adjacent biphenyl linkage is greater than 35°.

29. The device of claim 1 wherein the phosphorescent emitting material is an organometallic complex comprising at least one ligand and a metal selected from the group consisting of W, Mo, Ir, Rh, Os, Pt, and Pd.

30. The device of claim 29 wherein the metal is Ir.

31. The device of claim 29 wherein the ligand comprises a phenylpyridine group.

32. The device of claim 1 wherein the phosphorescent emitting material is present in an amount of up to 15 wt% based on the host.

33. The device of claim 1 wherein the light-emitting material is part of a polymer.

34. The device of claim 1 wherein the host material is part of a polymer.

35. The device of claim 1 including a means for emitting white light.

36. The device of claim 35 including a filtering means.

37. The device of claim 1, including a fluorescent emitting material.

38. A display device comprising the OLED device of claim 1.

39. An area lighting device comprising the OLED device of claim 1.

40. A process for emitting light comprising applying a potential across the device of claim 1.